

WEST BASIN MUNICIPAL WATER DISTRICT

DECEMBER 8, 2004 - Water Resources  
Little, Kwan

DECEMBER 20, 2004 - Board Meeting

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Approved by: Richard Nagel

ACTION CALENDAR

OCEAN-WATER DESALINATION UPDATESUMMARY:**Affordable Desalination Collaborative (ADC) Funding**

The ADC was formed to show that continued development in the fields of energy recovery systems, high-pressure pumps, and low-energy reverse osmosis membranes has reduced the overall energy consumption of ocean-water desalination. Preliminary findings indicate that up to 20% savings in the treatment process can be achieved by utilizing these commercially available systems. ADC aims to construct and test an Ocean-Water Desalination Pilot Plant to confirm these findings.

In August, 2004 the Board authorized the Co-Acting General Managers to apply for the MWD \$50,000 grant to participate in the Affordable Desalination Demonstration Project. Staff has submitted the grant application. MWD staff has indicated that the grant will be approved. The California Energy Commission (CEC) and the California Department of Water Resources (DWR) are interested in participating by also contributing \$50,000 each. Both agencies have requested that their sponsorship be managed through West Basin. Subsequently, West Basin has submitted a request to the CEC and DWR for funding.

The CEC and DWR typically take several months to process requests and typically provide the funding after the research is completed. However, the CEC has signed a "Letter of Intent" LOI (see Exhibit A) to show their commitment to this Project. DWR staff has indicated that they will also sign an LOI.

ADC has requested the full \$150,000 of funding from West Basin for construction, installation and start up of the Pilot Plant. This funding will assure that the research is not delayed. Funding from the U.S. Bureau of Reclamation has already been committed for the operations of the Pilot Plant. The other partners will be funding the data collection and analysis, report preparation, and outreach activities.

With the LOI's from the other agencies showing their desire to participate in this Project, staff recommends that the Board authorizes the Co-Acting General Managers to contribute a total of \$150,000 towards the Affordable Desalination Demonstration Project.

**Regional Water Quality Control Board (RWQCB) Extension Approval**

In September 2004, staff applied for an extension to the existing two-year waiver originally authorized by RWQCB in 2002. The waiver extension allows the District to continue operation of the District's Ocean-Water Desalination Pilot Plant located at the El Segundo Power Plant. RWQCB granted an extension to the original waiver through June of 2007, thus, allowing the

District to perform water quality and operational research on the Power Plant's post condenser effluent feed water source and operation of the pipe loop corrosion study.

### **U.S. Bureau of Reclamation Report**

Staff has submitted a draft copy of the final report to the U.S. Bureau of Reclamation for Phase A of the Ocean-Water Desalination Pilot Plant Research Program. This report includes the findings and recommendations from one-year of research performed on the Ocean-Water Desalination Pilot Plant located at the El Segundo Power Plant. Phase B of the study will include a similar testing program focused on the post condenser effluent of the Power Plant and the addition of a ultra-filtration pretreatment unit.

### **Pilot Plant Memorandum of Understanding (MOU)**

Staff met with management from El Segundo Power/NRG to discuss the extension of the MOU that allows the District to operate the Ocean-Water Desalination Pilot Plant. Items of discussion included the future research and development plans of the Pilot Plant, potential cost sharing, and long-term programs. Staff will finalize the MOU and bring it to the Board for approval.

### **Proposition 50 Proposals**

Staff is working with the District's consultants to prepare proposals that would petition Proposition 50 Grant money to perform ocean-water desalination research and feasibility studies. The research proposals will solicit approval to fund research on the operations and water quality of the El Segundo Power Plant post condenser effluent. The feasibility proposal will solicit funds to perform preliminary California Environmental Quality Assessment studies and biological and site characterization assessments. Proposals are due in mid January.

### **Technical Committee on Concentrate Management**

Staff will be participating on the Technical Committee on concentrate management, which will be held during the Salinity Conference in Las Vegas in December. This Technical Committee has been tasked and supported by the American Society of Civil Engineers and American Water Works Research Foundation with developing industry standards and technical specifications for concentrate discharges for brackish groundwater, recycled water, and ocean-water desalination. This standard will play an important role in how the District could potentially be responsible for handling concentrate discharges.

### **Metropolitan Water District (MWD) Seawater Desalination Program**

Staff has reviewed the contract agreement for the Seawater Desalination Program offered by MWD and will be working with MWD staff to discuss the issues that could potentially effect the development of the District's Ocean-Water Desalination Program. Some of the items include the distribution and future wheeling charges that would be assessed to the District and the acceptance of ocean-water into MWD's distribution system.

**EI Segundo Power Permit**

EI Segundo Power has not been rescheduled for the California Energy Commission hearing. The issuance of their repowering permit continues to be delayed. Staff is continuing to monitor their progress and will report any changes to the Board.

**MWD Offshore Desal Meeting**

Staff attended a meeting at MWD to discuss a proposal by an independent water purveyor seeking to desalinate ocean-water on an offshore vessel and distribute the water to local communities along the California Coast. Staff has evaluated their proposal and found that their proposed cost is not competitive with what the member agencies can accomplish by facilitating on-shore ocean-water desalination treatment.

FISCAL IMPACTS:

None.

ENVIRONMENTAL COMPLIANCE:

None.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Committee on December 8, 2004 and agendized to the December 20, 2004 Board meeting as information for discussion.

RECOMMENDED MOTIONS:

That the Board authorizes the Co-Acting General Managers to contribute a total of \$150,000 towards the Affordable Desalination Demonstration Project. The District is to be reimbursed \$50,000 from the MWD grant, \$50,000 from the CEC, and \$50,000 from DWR.

EXHIBITS:

Exhibit "A" - California Energy Commission Letter of Intent